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KANSAS DEPARTMENT OF HEALTH & ENVIRONMENT

PROCEDURE FOR THE CLEANUP OF A SURFACE BRINE SPILL AT SALT SOLUTION MINING FACILITIES

Procedure #: UICIII-1
(6/04)

Narrative:

Brine spills or accidental brine releases to the soil can result in contamination of the soil, surface waters, and the groundwater. Brine can destroy the vegetative cover and contribute to soil erosion. The leaching of salts precipitated in the soil from brine may result in groundwater contamination. Brine contamination can increase the sediment load in surface waters and degrade the water quality. Aquatic life in surface waters may also be impacted. Prompt clean-up response by the responsible party will lessen the impact to public health, safety, and the environment.

Procedure:

1. Immediately report spill or accidental release to KDHE's Spill Number (785-296-1679). The KDHE Spill Packet is posted on the Bureau of Remediation web site www.kdhe.state.ks.us/spill/. Spills that are prevented from reaching soil or water by collection in a secondary containment structure do not have to be reported to the Spill Number but must be reported to the Underground Injection Control (UIC) Unit (785-296-1843 or 785-296-5554).

2. Construct a berm, dike, or other containment structure to contain flow of lost fluid.

3. Immediately begin recovery of all lost fluid.

4. Check depth of brine penetration in the soil. Note if the spill area has previously been impacted by brine contamination.

5. Flush the impacted area with fresh water or KDHE aproved liquid. Begin flushing at the upgradient boundary of the impacted area. The flushing water must be recovered in a manner approved by KDHE. Disposal of the flushing water collected in the containment area must be approved by KDHE.

6. Till the soil to the depth of brine penetration if the soils in the impacted area dry out before the initial flushing process can be completed. Blush the impacted area again.

7. Continue flushing with water until the chloride concentration in the flush water is equal to or less than 400 ppm.

8. Notify KDHE if site-specific conditions do not warrant flushing. Alternative clean-up methods, such as soil removal in the impacted area, may be approved. If soil removal is approved, disposal of the excavated soil must be approved by BOW and authorized by the Bureau of Waste Management (BWM).

9. Collect soil and/or water samples for chloride analysis to verify that the threat of pollution has been eliminated if sampling is required by KDHE. The KDHE may split samples with the responsible party.

10. Notify KDHE if the chloride concentration in the flush water remains above 400 ppm. The site may be referred to BER for further cleanup action.

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